

**Savannah River Site
Citizens Advisory Board**

Recommendation # 290

Assess Feasibility of Disposition of SRS Canisters to WIPP

Background

SRS is presently involved in a massive cleanup effort that could take approximately 40 years to complete and cost in excess of \$60 Billion. As the Site nears the midpoint of that cleanup which began in the early to mid 1990s one aspect of the planning for cleanup has recently been brought into question. That is the manner in which the canisters containing the radioactive waste from the nuclear material separation program are handled and ultimately disposed of in some national repository.

Probably the most significant aspect of cleanup (and certainly the most hazardous) is the liquid radioactive waste generated when the products of years of production (plutonium) were chemically processed. This led to an extensive liquid waste treatment program known as the High Level Radioactive Waste. The most dangerous waste from this process is ultimately placed in a glass form (for chemical stability) in stainless steel containers in the Site Defense Waste Processing Facility (DWPF).

For many years the long-range plan was to store these canisters at SRS in special seismic-resistant buildings until these canisters could be removed and shipped to a national repository for final disposition. All of this changed in 2010 when the Obama Administration made the decision that the planned repository known as Yucca Mountain was no longer acceptable and a new approach would be developed. This in essence wiped out 30 years of repository planning and construction activity with it attendant billions of cost.

SRS is now storing these canisters with no known final disposition path. At the present time the Site has produced approximately 3,100 canisters of the 7,550 canisters anticipated needed for final cleanup. These canisters are being stored in two glass waste storage buildings, but an additional building will be needed in the next 4 to 5 years (at a cost of \$10M to \$20M) if shipments off site are not begun.

The indefinite storage of these completed and “ready for shipment” canisters has not been accepted well by the surrounding communities. The entire planning basis has been undermined and the credibility of DOE to handle this matter has been brought into question.

Discussion

The CAB is concerned that the planning for another repository will take many years of effort (possibly another 30 years) with it attendant scientific and financial uncertainties. In the meantime the Site will continue to store material that should have been removed (by earlier credible planning) many years earlier.

It is the view of the CAB that DOE should take measures to assess if some or all of the SRS high level radioactive waste canisters could be disposed of at the alternative waste site known as Waste Isolation Pilot Plant (WIPP). The WIPP site was designed for the disposition of these type

canisters but only licensed for the disposition of transuranic wastes (smaller and less concentrated amounts of plutonium and other similar nuclides). We further understand that any such revised disposition plan would likely require congressional approval.

However, from our limited understanding the WIPP site would be technically feasible and it seems to have an astounding amount of capacity to accept radioactive waste. Further, removing canisters from SRS would have an immediate positive impact on the surrounding communities. It would be a show of “good faith” for removal of waste from SRS and further it may result in real cost savings to the Site. For example, if shipments of canisters could be undertaken in a timely manner it may be that the third planned storage building for the canisters would not be necessary.

One other consideration is offered up. We are aware that when the Site began processing the radioactive waste into the glass form the first material processed was sludge from the storage tanks. Some of this sludge material did not contain extremely high levels of radioactivity and hence are likely to be much “cooler” in terms of heat load and radiation exposure. We therefore suggest that perhaps these less radiation-intensive canisters would be more amenable for shipment to WIPP, at least in the first stages of any such program as noted above.

At any rate, in view of the uncertainties surrounding a federal repository and canister removal from SRS it would be a dramatic and positive measure for the Site to develop (or at least assess) plans for the removal of the DWPF canisters to an alternative location rather than another 30 year wait for a federal repository.

Recommendations:

The Savannah River Site Citizens Advisory Board recommends that:

1. DOE assess the viability of using WIPP as a disposition site for canisters such as those at SRS.
2. SRS assess which, if any, of the canisters at SRS would be acceptable for disposition at WIPP.
3. If WIPP is found to be acceptable, DOE evaluate the feasibility of making shipments of canisters to WIPP in lieu of building a third canister storage building.
4. If WIPP is found to be acceptable, DOE develop in the broadest sense a schedule for removal of the canisters from SRS.

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Adopted May 22, 2012

Sponsored by the Waste Management Committee